UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,168	07/28/2000	RICHARD BENAROUS	935.38812X00	8585

20457 7590 03/25/2002

ANTONELLI TERRY STOUT AND KRAUS
SUITE 1800
1300 NORTH SEVENTEENTH STREET
ARLINGTON, VA 22209

EXAMINER	
SCHNIZER, HOLLY G	
ART UNIT	PAPER NUMBER
1653	7

DATE MAILED: 03/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

FILE COPY

Office Action Summary	Application No. 09/601,168	Applicant(s) BENAROUS ET AL.	
	Examiner Holly Schnizer	Art Unit 1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 22-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-7 and 22-50* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of the Claims

The sequence listing and CRF filed October 19, 2001 as Paper No. 6 is entered and is in compliance with the sequence rules. The Preliminary Amendment of Paper No. 4 has been entered. Claims 8-21 have been cancelled. Claims 37-50 have been added. Therefore, Claims 1-7 and 22-50 are pending.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-5, 7, 27, 31, 32, and 37, drawn to human βTrCP of SEQ ID NO:2 having WD units and an F-box, polynucleotides encoding the protein, vectors containing the polynucleotide, host cells containing the vector, and a method of identifying anti-HIV-1 agents by a protein assay that determines the capability of the candidate agent to inhibit the interaction of human βTrCP and Vpu, classified in class 530, subclass 350.

Group II, claim(s) 22 and 28, drawn to anti-HIV agents and anti-inflammatory agents consisting of peptide fragments of human βTrCP devoid of the Fbox, classified in class 530, subclass 350.

Group III, claim(s) 7, 31, and 32, drawn to polynucleotides encoding peptide fragments of human βTrCP devoid of the Fbox, classified in class 536, subclass 23.1.

Group 4, claim(s) 23, drawn to an anti-HIV agent consisting of a peptide fragment of . human βTrCP devoid of WD units, classified in class 530, subclass 350.

Group 5, claim(s) 7, 31, and 32, drawn to nucleic acid molecules encoding peptide fragments of human h-βTrCP devoid of the WD units, classified in class 530, subclass 350.

Group 6, claim(s) 24, drawn to antibodies to an h-βTrCP protein, classified in class 530, subclass 387.1.

Group 7, claim(s) 25, drawn to antisense oligonucleotides, classified in class 536, subclass 24.5.

Group 8, claim(s) , drawn to anti-tumor agents consisting of a peptide fragment of h-βTrCP which possesses the F-box, classified in class 530, subclass 350.

Group 9, claim(s) 29, drawn to transgenic mouse expressing a transgene for expression of h-βTrCP of SEQ ID NO:2 , classified in class 800, subclass 8

Group 10, claim(s) 30, drawn to a knock out mouse with an invalidated h-βTrCP gene, classified in class 536, subclass 24.5.

Group 11, claim(s) 33, drawn to host cells with a vector expressing Vpu and a vector expressing h-βTrCP, classified in class 435, subclass 252.3.

Group 12, claim(s) 34, drawn to host cells with a vector expressing SKp1p and a vector expressing h-βTrCP, classified in class 435, subclass 252.3.

Group 13, claim(s) 35, drawn to a host cell with a vector expressing IκB and a vector expressing h-βTrCP, classified in class 435, subclass 252.3.

Group 14, claim(s) 36, drawn to host cells containing a vector expressing β-catenin and a vector expressing h-βTrCP, classified in class 435, subclass 252.3.

Group 15, claim(s) 38, drawn to a protein assay for identifying anti-HIV-1 agents by determining the capability of a candidate agent to inhibit interaction of h-βTrCP with Skp1p, classified in class 435, subclass 7.1.

Group 16, claim(s) 39, drawn to a nucleic acid assay for identifying anti-HIV-1 agents by determining the capability of a candidate agent to inhibit interaction of h-βTrCP with Vpu, classified in class 435, subclass 6.

Group 17, claim(s) 40, drawn to a nucleic acid assay to identify anti-HIV-1 agents that inhibit interactions of h-βTrCP with Skp1p, classified in class 435, subclass 6.

Group 18, claim(s) 41, drawn to a protein assay to identify anti-tumor agents by determining the capability of a candidate to perturb regulation of the cell cycle or protein

degradation process in tumor cells by modulation of the interaction of h-βTrCP with Skp1p, classified in class 435, subclass 377.

Group 19, claim(s) 42, drawn to a nucleic acid assay to identify anti-tumor agents by determining the capability of a candidate agent to perturb regulation of the cell cycle or protein degradation process in tumor cells by modulation of the interaction of h-βTrCP with Skp1p, classified in class 435, subclass 377.

Group 20, claim(s) 43, drawn to a protein assay to identify anti-inflammatory agents by screening candidate agents to determine if they perturb activation of NFκB by inhibiting the interaction between h-βTrCP and IκB, classified in class 435, subclass 7.1.

Group 21, claim(s) 44, drawn to a nucleic acid assay to identify anti-inflammatory agents by screening candidate agents to determine if they perturb activation of NFκB by inhibiting the interaction between h-βTrCP and IκB, classified in class 435, subclass 6.

.

Group 22, claim(s) 45, drawn to a protein assay to identify anti-tumor agents by screening the candidate agents for reactivation of the interaction between h-βTrCP and β-catenin. In tumor cells devoid of APC protein, classified in class 435, subclass 7.1.
.

Group 23, claim(s) 46, drawn to a nucleic acid assay to identify anti-tumor agents by screening the candidate agents for reactivation of the interaction between h-βTrCP and β-catenin. In tumor cells devoid of APC protein, classified in class 435, subclass 6.
.

Group 24, claim(s) 47, drawn to a protein assay for identifying anti-Alzheimer's agents by screening candidate agents for ability to reduce the degree of degradation of β-catenin by inhibiting the interaction between h-βTrCP and β-catenin, classified in class 435, subclass 7.1.

Group 25, claim(s) 48, drawn to a nucleic acid assay for identifying anti-Alzheimer's agents by screening candidate agents for ability to reduce the degree of degradation of β-catenin by inhibiting the interaction between h-βTrCP and β-catenin, classified in class 435, subclass 6.

Group 26, claim(s) 49, drawn to a method of detecting β-catenin mutations by a protein-protein binding assay, classified in class 435, subclass 7.1.

Group 27, claim(s) 50, drawn to a method of detecting β-catenin mutations by a protein-nucleic acid assay, classified in class 435, subclass 6.

The inventions listed as Groups 1-27 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Pursuant to 37 C.F.R. 1.475(d), the ISA/US considers that where multiple products and processes are claimed, the main invention shall consist of the first invention of the category first mentioned in the claims and the first recited invention of each of the other categories related thereto. Accordingly, the main invention (Group 1) comprises the first-recited product, a human βTrCP protein of SEQ ID NO:2, the nucleic acid encoding it, a vector comprising said nucleic acid molecule, a host cell comprising said vector, and a method of using the protein to identify anti-HIV-1 agents. Further, pursuant to 37 C.F.R. 1.475(d), the ISA/US considers that any feature which the subsequently recited products and methods share with the main invention does not constitute a special technical feature within the meaning of PCT Rule 13.2 and that each of such products and methods accordingly defines a separate invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Schnizer whose telephone number is (703) 305-3722. The examiner can normally be reached on Mon. & Thurs., 8am-5:30pm and Tues. & Wed. 9-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703 308-0196.

Holly Schnizer
March 21, 2002

Christopher S. Low
CHRISTOPHER S. F. LOW
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600